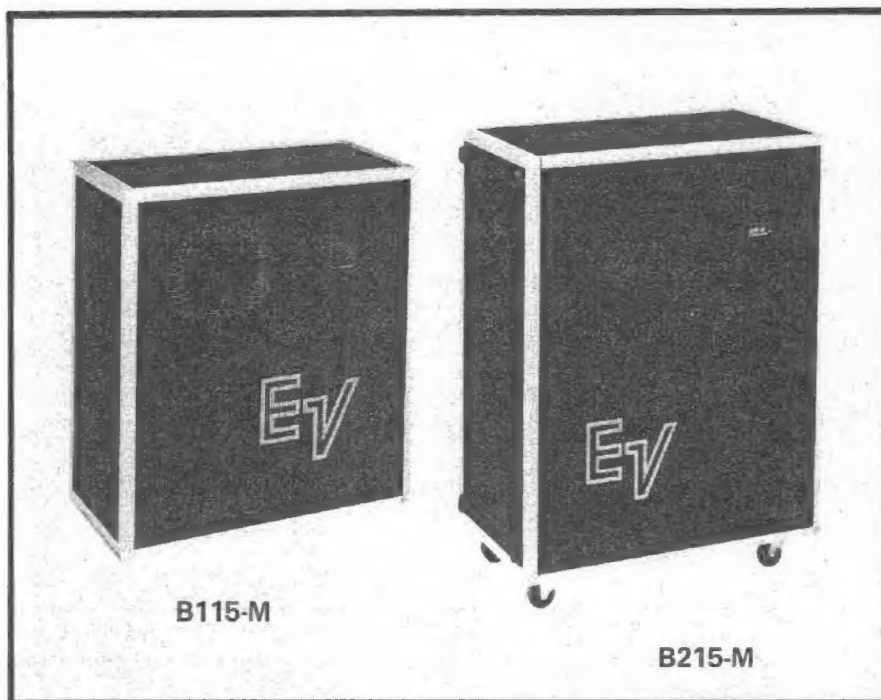


Electro-Voice®
a gulton company



Model B115-M/B215-M Two-Way Bass Speaker Systems

SPECIFICATIONS

Usable Frequency Response:

40 Hz to 5 kHz

Sound Pressure Level,*

B115-M:

4 ft at 200 watts input

124 dB

10 ft at 1 watt input

93 dB

B215-M:

4 ft at 400 watts input

127 dB

10 ft at 1 watt input

96 dB

Long-Term Average Power Handling Capacity,**

B115-M:

200 watts

B215-M:

400 watts

Nominal Impedance,

B115-M:

8 ohms

B215-M:

4 ohms

Minimum Impedance,

B115-M:

3.7 ohms

B215-M:

2.7 ohms

Crossover Frequency:

600 Hz

Connections:

Parallel 1/4" phone jacks (allows paralleling of multiple speakers)

Enclosure Material:

3/4" plywood

Finish:

Black vinyl with aluminum trim

Dimensions,

B115-M:

72.9 cm (28.7") high, including rubber feet

35.1 cm (13.8") deep

61.9 cm (24.4") wide

B215-M:

98.6 cm (38.8") high, including casters

38.6 cm (15.2") deep

71.6 cm (28.2") wide

Weight,

B115-M:

42.2 kg (93 lbs)

B215-M:

53.1 kg (117 lbs)

*Input Spectrum: white noise fed into shaping filter with 6-dB-per-octave slopes below 40 Hz and above 318 Hz.

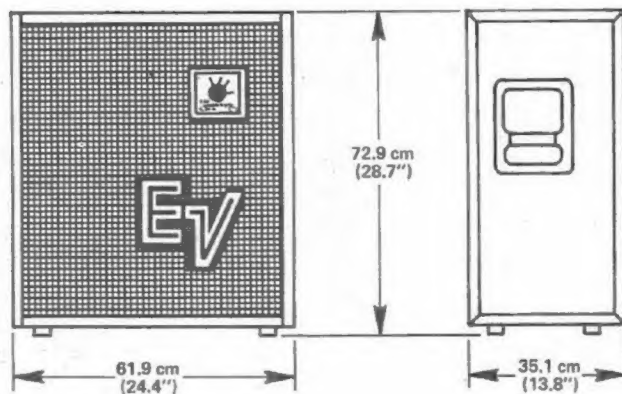
**See POWER HANDLING TEST section.

DESCRIPTION

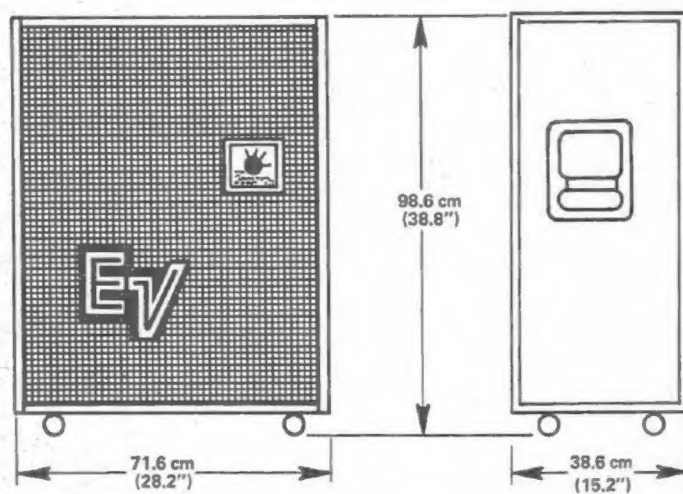
The Electro-Voice Model B115-M and B215-M are a fresh new approach to bass guitar speaker design. Bass speakers have been evolving from the traditional "dull" bass guitar sound to the wider range lead guitar sound. Electro-Voice has taken this process one step farther by adding our exclusive vented mid-range cone speaker (VMR).

The VMR couples a 6-inch cone to our largest (16 lb) magnetic structure housed in an integral vented enclosure. The VMR gives the musician a new freedom in exploring creative percussive bass sound. In addition, greater dispersion is obtained at the high end which offers listeners off axis of the speaker system the same brilliant sound as on axis. Also, the Thiele-vented low-frequency enclosures for these systems have been carefully tuned at 40 Hz to reduce speaker diaphragm excursion at the lowest bass guitar tones. This prevents speaker bottoming under any normal conditions.

The B115-M is a two-way system containing one EVM15L low-frequency speaker and one VMR in a 4 cubic feet enclosure. The B115-M can generate 124 dB SPL at 4 feet with full input power.



B115-M



B215-M

FIGURE 1 – Dimensions

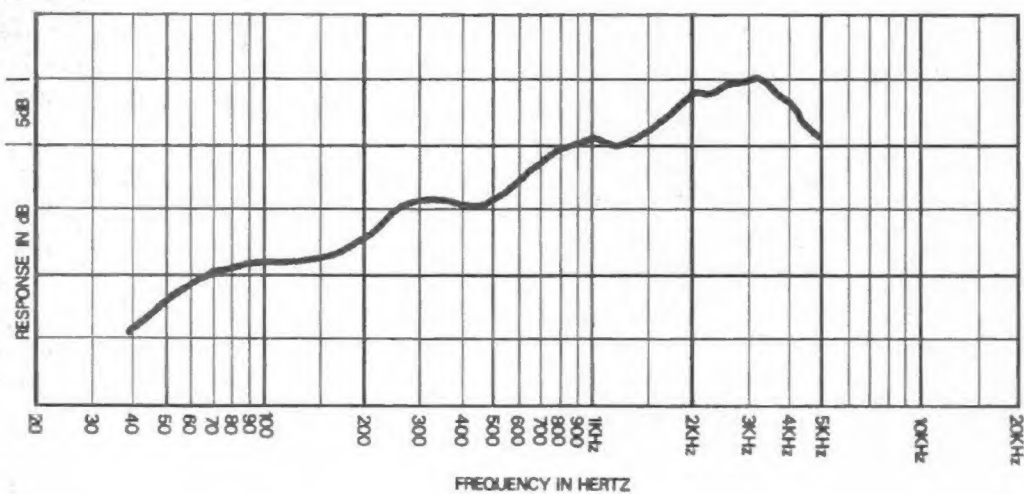


FIGURE 2 – B115-M Frequency Response
(Swept 1/3-Octave Band Pink Noise,
Half-Space Environment)

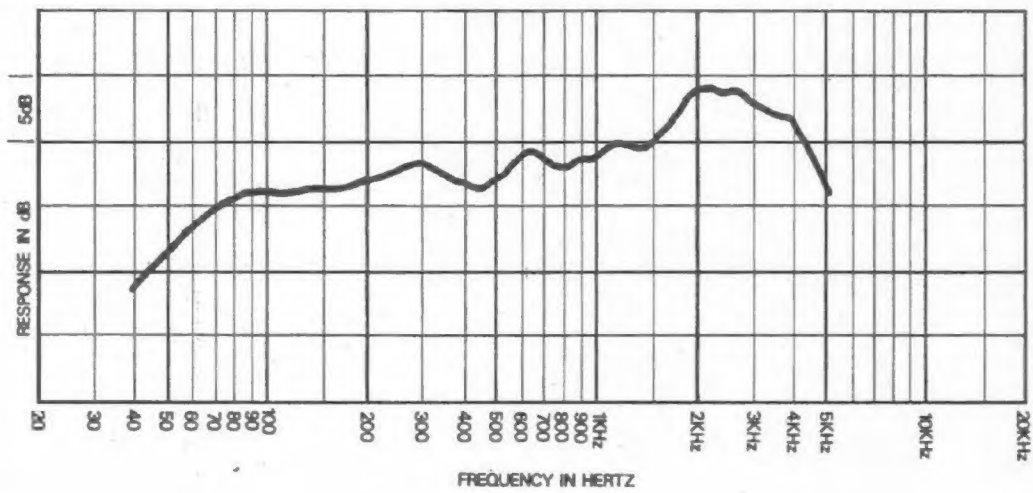


FIGURE 3 – B215-M Frequency Response
(Swept 1/3-Octave Band Pink Noise,
Half-Space Environment)

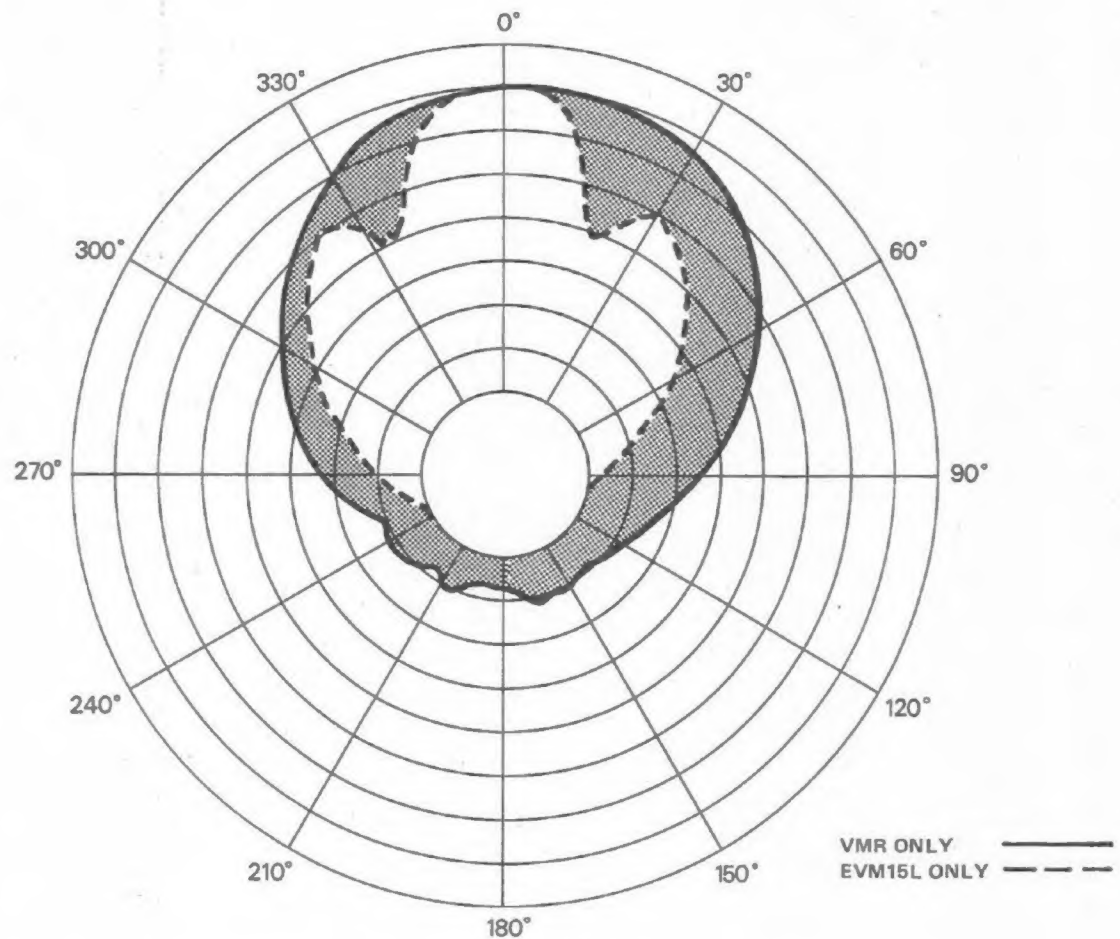


FIGURE 4 – B115-M Polar Response in Horizontal Plane
EVM15L vs VMR at 4 kHz
(5 dB per Division)

The B215-M is also a two-way system, but with two EVM15L speakers and one VMR in a 6-1/2 cubic feet enclosure equipped with heavy duty casters. The B215-M can deliver 127 dB SPL at 4 feet with full input power.

Both the B115-M and B215-M incorporate a front-mounted midrange level control so that the bass player may tailor his system to achieve the degree of brightness desired.

Enclosures for the B115-M and B215-M are constructed of black vinyl-covered 3/4-inch plywood, with protective extruded aluminum trim and recessed handles. The rugged construction of these speaker systems makes them ideal for road use.

APPLICATIONS

The B115-M and B215-M are speaker systems designed for the bass guitar musician. The B115-M has the "light sound" preferred by many jazz bass guitar players. Also, the B115-M is ideal for studio use. In addition, B115-M's may be stacked for sufficient output to cover larger rooms and still retain the "light sound."

The B215-M has a "heavier sound" preferred by many rock bass players. The B215-M may be used upright or laid down on its side. When laid down, both EVM15L's couple closely to the floor, providing a different tonal quality.

FREQUENCY RESPONSE

Frequency response data was measured in a half-space anechoic (echoless) environment at 10 feet on axis with 4 volts of swept 1/3-octave random noise. The frequency response curves for the B115-M and B215-M are shown in Figures 2 and 3.

DISPERSION

The advantage of using the VMR is shown dramatically in the polar response curves of Figure 4.

The polar response curves of the B115-M at 4 kHz are shown with the EVM15L only and the VMR only. The more ragged curve is that of the EVM15L which shows that at a frequency of a 4 kHz the EVM15L is becoming somewhat directional. A

similar effect holds for other high frequencies as well. This is the reason Electro-Voice adds the VMR.

The broader, more uniform curve of the VMR means that the angle of coverage is greater. This makes the bright bass guitar sound possible and distributes this sound evenly throughout the performing area.

HIGH FREQUENCY ATTENUATION CONTROL

The High Frequency control is mounted on the front of the system for the convenience of the performer. This control attenuates the level of the vented midrange in three steps, from 600 Hz up. The 0 dB position leaves the vented midrange at full output. The next two positions attenuate the high-frequency level in 6 dB steps and the last counterclockwise position turns the vented midrange off, leaving the EVM15L operating alone, full range.

POWER HANDLING TEST

To our knowledge, Electro-Voice was the first U.S. manufacturer to develop and publish a power test closely related to real-life conditions. First, we use a random noise input signal because it contains many frequencies simultaneously, just like real voice or instrument program. Second, our signal contains more energy at extremely high and low frequencies than typical actual program, adding an extra measure of reliability. Third, the test signal includes not only the overall "long-term average" or "continuous" level — which our ears interpret as loudness — but also short-duration peaks which are many times higher than the average, just like actual program. The long-term average level stresses the speaker thermally (heat). The instantaneous peaks test mechanical reliability (cone and diaphragm excursion). Note that the sine wave test signals sometimes used have a much less demanding peak value relative to their average level. In actual use, long-term average levels exist from several seconds on up, but we apply the long-term average for several hours, adding another extra measure of reliability.

Specifically, the B115-M and B215-M are designed to withstand the power test described in EIA Standard RS-426. The EIA test spectrum is applied for eight hours. To obtain the spectrum, the

output of a white noise generator (white noise is a particular type of random noise with equal energy per bandwidth in Hz) is fed to a shaping filter with 6-dB-per-octave slopes below 40 Hz and above 318 Hz. When measured with the usual constant-percentage bandwidth analyzer (one-third octave) this shaping filter produces a spectrum whose 3-dB-down points are at 100 Hz and 1200 Hz with a 3-dB-per-octave slope ^{above} 1200 Hz. This shaped signal is sent to the power amplifier with the continuous power set at 200 watts into the 6 ohms EIA equivalent impedance for the B115-M and 400 watts into the 3 ohms EIA equivalent impedance for the B215-M (34.6 volts true RMS). Amplifier clipping sets instantaneous peaks at 9 dB above the continuous power, or 1600 watts peak for the B115-M and 3200 watts peak for the B215-M (98.0 volts peak). This procedure provides a rigorous test of both thermal and mechanical failure modes.

WARRANTY (Limited) —

Electro-Voice Music Loudspeaker Systems and Accessories are guaranteed for five years from date of original purchase against malfunction due to defects in workmanship and materials. If such malfunction occurs, unit will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to the proper Electro-Voice service facility. Unit will be returned prepaid. Warranty does not cover finish or appearance items or malfunction due to abuse or operation at other than specified conditions. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee.

For repair information and service locations, please write: Service Department, Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (Phone 616/695-6831) or 7473 Avenue (209/625-1330-1).

Electro-Voice also maintains complete facilities for non-warranty service of E-V products.

Specifications subject to change without notice.